

REMARKS

Applicant and Applicant's representative express appreciation to the Examiner for the courtesies extended during the recent interview held on September 12, 2006. Reconsideration and allowance for the above-identified application are now respectfully requested in view of the foregoing amendments and the following remarks. Claims 1-22 remain pending in the application, wherein claims 1, 3-7, 13-17 and 19-22 have been amended.

As discussed during the examiner interview, Applicant intends for claim 1 to invoke the provisions of 35 U.S.C. § 112, sixth paragraph. The examiner indicated that doing so would overcome the art of record, since they neither teach nor suggest the corresponding structure disclosed in the specification or equivalents thereto. The importance of removing mostly sludge while minimizing mixing of the sludge and water is taught in the application at paragraphs [0014] to [0016] of the application. Neither Ekenback et al. (US 6,306,309) nor Mims (US 4,957,622) teach or suggest a sludge harvester comprising a frame having an outer perimeter comprised of a plurality of sideboards and an interior portion at least partially bounded by said sideboards; one or more wheels or skids attached to said frame; means, at least partially disposed within said interior portion of said frame, for breaking up at least a portion of a sludge layer adjacent to an aqueous dilute layer while minimizing agitation of the sludge layer and mixing of the sludge layer with the adjacent aqueous dilute layer; means, at least partially disposed within said interior portion of said frame, for preferentially capturing at least a portion of a broken up sludge layer rather than the adjacent aqueous dilute layer; and means for transporting captured sludge from within said frame to a location outside of a sludge pond during use. Among other things, the apparatus of Ekenback et al. and Mims lack the combination of structural and functional features recited in claim 1 in means-plus-function format as discussed in the examiner interview.

Claims 2-12 are likewise patentable and may include additional limitations that further distinguish over the art of record. For example, claim 2 recites a flat bed. Claim 3 recites that the flat bed in combination with said plurality of sideboards at least partially bounds said interior portion of said frame so as to reduce at least one of vortexing, turbulence, and mixing. The limitations of claims 2 and 3 are not taught or suggested in the applied art. Claims 4 and 5 were deemed to define allowable subject matter. Claim 6 recites that said means for breaking up at least a portion of a sludge layer comprises a rake having a plurality of spaced-apart teeth attached to said frame and which generally point downward relative to said frame in order to cut through

and break up a sludge layer when the sludge harvester is pulled through a sludge pond, which is not taught or suggested in any art of record. Claims 7-10 variously claim a pump having a specific orientation, functionality and/or flow rate that is neither taught nor suggested in the art (e.g., the pump inlet of Petering (US 5,545,326) is positioned to remove water not sludge from the settling basin; *see* Figure 2). Support for a pump having an inlet beneath a flat bed or otherwise positioned so as to preferentially capture the broken up sludge instead of the aqueous dilute layer is shown in Figures 1-3 of the application in light of the clear teachings in the specification that the pump comprises means for capturing broken up sludge, not water.

Claim 13 alternatively claims a sludge harvester comprising a frame; one or more wheels or skids attached to said frame; at least one of a pin mixer, auger or rake having a plurality of spaced-apart teeth attached to said frame and which generally point downward relative to said frame designed and positioned so as to break up at least a portion of a sludge layer adjacent to an aqueous dilute layer while minimizing agitation of the sludge layer and mixing of the sludge layer with the adjacent aqueous dilute layer when the sludge harvester is in use; and at least one suctioning pump designed and positioned on said frame so that an inlet of said pump is positioned so as to preferentially capture a broken up sludge layer rather than the adjacent aqueous dilute layer. The Office Action acknowledges that the applied art fails to disclose or suggest a sludge harvester having a pin mixer or auger to break up the sludge layer. As discussed in the examiner interview, the applied art fails to teach or suggest a device having a rake having a plurality of spaced-apart teeth attached to said frame and which generally point downward relative to said frame in order to break up a sludge layer, an example of which is shown in Figures 2A and 2B of the application. A rake with downwardly facing teeth is better adapted to break up a sludge layer compared to teeth that are either parallel to the pond bottom, as in Figure 7 of Mims, or that point upward and ride above the sediment layer, as arguably suggested in Figure 4 of Mims. *See* col. 9, lines 24-40 (Figure 4 does not, in fact, show a rake).

Claims 14 and 15 further distinguish over the applied art for reasons discussed above relative to claims 2, 3, 7 and 9. Claim 16 recites a method of using the device of claim 1.

Claim 21 alternatively claims a sludge harvester comprising a frame having a flat bed, one or more wheels or skids attached to said frame, means for breaking up at least a portion of a sludge layer adjacent to an aqueous dilute layer while minimizing agitation of the sludge layer and mixing of the sludge layer with the adjacent aqueous dilute layer, and a pump attached to said frame for capturing at least a portion of a broken up sludge layer, wherein said pump is

designed to pump about 200 gallons per minute or less during use, wherein an inlet of said pump through which sludge is captured is positioned beneath said flat bed in order to preferentially capture a broken up sludge layer rather than the adjacent aqueous dilute layer. None of the art of record disclose a device have the combination of features, including a flat bed and a pump having the specified flow rate in which the inlet is positioned beneath the flat bed in order to preferentially capture a broken up sludge layer rather than the adjacent aqueous dilute layer. Petering, for example, discloses a pump positioned so as to capture water not sludge,

Claim 22 alternatively claims a sludge harvester for removing a concentrated nutrient sludge from a sludge pond, comprising a frame, one or more wheels or skids attached to said frame, at least one of a pin mixer, auger or rake having a plurality of spaced-apart teeth attached to said frame and which generally point downward relative to said frame designed and positioned so as to break up at least a portion of a sludge layer adjacent to a dilute layer while minimizing agitation of the sludge layer and mixing of the sludge layer with the adjacent aqueous dilute layer when the sludge harvester is in use, and at least one pump designed so as to pump a volume of about 200 gallons per minute or less during use and having an inlet positioned so as to preferentially capture at least a portion of a broken up sludge layer rather than the adjacent aqueous dilute layer. None of the cited art includes a pin mixer, auger or rake having the claimed structural relationship as discussed above. Nor do they teach or suggest a pump having the specified flow rate in combination with the claimed position relative to the sludge layer.

In conclusion, Applicant submits that the Application is currently in allowable form. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview or which may be overcome by examiner amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 15th day of September 2006.

Respectfully submitted,



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